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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,917	07/18/2003	Robert W. Dobbs	200300846-1	2747

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HEWLETT-PACKARD DEVELOPMENT COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

JIANG, CHEN WEN

ART UNIT PAPER NUMBER

3744

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,917

Applicant(s)

DOBBS ET AL.

Examiner

Chen-Wen Jiang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22, 24-28 and 31-35 is/are rejected.
- 7) ☒ Claim(s) 23, 29 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: claim 24 recites the limitation "said second sensor" in line 3. There is insufficient antecedent basis for this limitation in the claim.

2. The following rejections are based on the best understanding of the claimed limitations.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 13,14 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimura et al. (JP20000277957 equivalent to US 6,487,074).

Kimura et al. disclose a cooling system for electronic device. Referring to Figs.3A,4A and 4B, the system comprises a heat-generating element 30, cooling fan 42, switch 43 and port 40. A plurality of temperature sensors may be installed within the case 41, and the switching of the operations of the cooling fan may be controlled by inputting signals detected by the temperature sensors to the switching portion 43. According to the above system, portions in which the temperatures are raised at least the prescribed temperature are selectively and intensively cooled. A partition may be installed in the prescribed portion within the case 41 to control airflow within the case 41. Under the principals of inherency, if a prior art device, in its normal and usual

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operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. *Ir re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al.. Kimura et al. disclose the invention substantially as claimed. However, Kimura et al. do not disclose wired or wireless link. It is common knowledge in the prior art to have either wired or wireless in the same field of endeavor for the purpose of control cooling. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have either wired or wireless in order to control cooling.

7. Claims 6,7,13,14,15,18,19,20,25,28 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanners (U.S. Patent Number 6,128,188).

Hanners discloses a self-balancing thermal control device for integrated circuits.

Referring to Figs.15,16 and 21, the device comprises a fan 74,112, a controller 116, integrated circuits 80 and air flow controlling thermal control devices 82. The vanes of thermal control devices 82 within each channel control the relative amount of cooling air 75 that passes through

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that channel. The thermal control device 82 is made of a thermomorphing material which is equivalent to the combination of temperature sensor and flow control vanes (e.g.; Iwatate (U.S. Patent Number 5,773,755)). The vanes of thermal control devices 82 of Fig. 15 not only help to limit the temperature range of ICs 80, they also act as a cooling air balancing system directing cooling air to the ICs 80 that most need it, thereby tending to keep all ICs at a relatively uniform temperature. The spaces between circuit boards 72A-72E form channels through which cooling air 75 passes en route between inlet port 76 and outlet port 78. The temperature range can be further limited by placing a temperature sensor 84 in outlet 78. Under the principals of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. *In re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986).

8. Claims 11,12,16,17,26,27,34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanners (U.S. Patent Number 6,128,188). Hanners discloses the invention substantially as claimed. However, Hanners does not disclose wired or wireless link. It is common knowledge in the prior art to have either wired or wireless in the same field of endeavor for the purpose of control cooling. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have either wired or wireless in order to control cooling.

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9. Claims 1,2,3,4,5,8,9,21,22,24,31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanners (U.S. Patent Number 6,128,188) in view of Spinazzola et al. (U.S. Patent Number 6,412,292).

In regard to claims 1,2,3,8,9,21,22,24,31 and 32, Hanners discloses a self-balancing thermal control device for integrated circuits. Referring to Figs. 15, 16 and 21, the device comprises a fan 74, 112, a controller 116, integrated circuits 80 and air flow controlling thermal control devices 82. The vanes of thermal control devices 82 within each channel control the relative amount of cooling air 75 that passes through that channel. The thermal control device 82 is made of a thermomorphing material which is equivalent to the combination of temperature sensor and flow control vanes. The vanes of thermal control devices 82 of Fig. 15 not only help to limit the temperature range of ICs 80, they also act as a cooling air balancing system directing cooling air to the ICs 80 that most need it, thereby tending to keep all ICs at a relatively uniform temperature. The spaces between circuit boards 72A-72E form channels through which cooling air 75 passes en route between inlet port 76 and outlet port 78. The temperature range can be further limited by placing a temperature sensor 84 in outlet 78. However, Hanners does not disclose the cooling air provided by an air conditioning system. Spinazzola et al. discloses cooling air provided by an air conditioning system in the same field of endeavor for the purpose of cooling electronic elements. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Hanners with an air conditioning cooling air in view of Spinazzola et al. so as to cool the electronic elements. Under the principals of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be

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anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. *Ir re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986).

In regard to claims 4 and 5, it is common knowledge in the prior art to have either wired or wireless in the same field of endeavor for the purpose of control cooling. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have either wired or wireless in order to control cooling.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanners, Spinazzola et al. as applied to claim 1 above, and further in view of Sagues et al. (U.S. Patent Number 4,557,225).

Sagues et al. disclose the step motor 38 controlled throttle valve 36 for flow control device.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Iwatare (U.S. Patent Number 5,773,755) is made of record as a temperature sensor 7 and valves 6 are interchanger with bimetal valve.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (703) 308-0275. The examiner can normally be reached on Tuesday-Friday from 7:00 to 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on (703) 308-2597. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang
Primary Examiner

A handwritten signature in black ink, appearing to be 'C-W Jiang', written in a cursive style.